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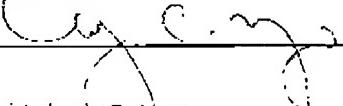
## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

200311026-1

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on October 14, 2008

Signature Typed or printed Joy C. Ngo  
name

Application Number

10/697,821

Filed

10/29/2003

First Named Inventor

Robert Cochran

Art Unit

2821

Examiner

Vy, Hung T

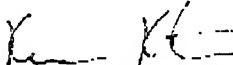
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

 applicant/inventor.

Signature

 assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

Ken J. Koestner

Typed or printed name

 attorney or agent of record.

Registration number 33004

(949) 251-0250

Telephone number

 attorney or agent acting under 37 CFR 1.34.

October 14, 2008

Registration number if acting under 37 CFR 1.34

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.



\*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Robert Cochran and Jeffrey D. Ferreira-Pro		
Assignee:	Hewlett-Packard Development Company L.P.		
Title:	HIERARCHICAL STORAGE SYSTEM		
Serial No.:	10/697,821	Filing Date:	October 29, 2003
Examiner:	Vy, Hung T	Group Art Unit:	2821
Docket No.:	200311026-1	Confirmation No.:	9535

Irvine, California  
October 14, 2008

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REMARKS IN SUPPORT OF  
PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

This paper is being filed with the Pre-Appeal Brief Request for Review responsive to the Final Office Action dated July 14, 2008, having a shortened statutory period expiring October 14, 2008. Further examination and reconsideration are respectfully requested in view of the amendments set forth below.

KIM STERN BRITTON LLP  
2192 MARTIN ST.  
SUITE 150  
IRVINE, CA 92626  
(714) 266-1511  
FAX (714) 261-0250

**OMISSION OF ESSENTIAL ELEMENTS REQUIRED TO ESTABLISH A PRIMA  
FACIE REJECTION**

*Rejection of Claims under 35 U.S.C. §102*

Claims 1-4 and 10-13, 18-22 and 24-25 are rejected under 35 U.S.C. §102(e) as being anticipated by Belsan et al. (US Patent No. 5,403,639). The rejections are improper at least because Belsan does not disclose "a storage array comprising a cabinet [and] . . . storage devices contained within the cabinet of at least three different and distinct controller-to-storage device bus interface technology types." Accordingly, applicants disclose a storage array contained within a single cabinet that include at least three different and distinct bus interface technology types. The file server system (1) disclosed by Belsan is silent with regard to containment within a single cabinet and relates to multiple different contained devices that intercommunicate. Applicants' claimed system that includes devices with multiple different bus interface technology types in a single contained array enables extra storage space to be accessed without constraints of LUN copy licenses, pre-assignment, or pre-configuration for unexpected and temporary or critical usage within a storage array.

In contrast, Belsan discloses, as shown in Figures 1 and 2, storage array units that individually contain only a single controller-to-storage device bus interface technology type in addition to a cache type. Column 4, for example at lines 34-38 and 60-64, of Belsan describes combinations of media of different types in distinct arrays and devices, but not a single, contained disk array that includes multiple bus interface technology types.

Column 3, lines 30-35, of Belsan describes "media used to store the data can be a disk array or any other media or combination of media such as a disk array in combination with a backend automated magnetic tape cartridge library system including a plurality of tape drives such that the file server system comprises a hierarchical data storage system containing multiple types of media" which relates to combinations of media of different types in distinct arrays and devices, but does not describe a single, contained disk array that includes multiple bus interface technology types.

KOETTNER BERTAN & HUT  
2102 MARTIN ST.  
SUITE 150  
IRVINE, CA 92612  
TEL (949) 251-0250  
FAX (949) 251-0250

Belsan in Figure 2 and described in column 8, lines 15-20, clearly shows that the magnetic tape cartridges 10a and 10b are outside and separate from the data storage subsystem 100 and individual disk arrays 103-1. The Belsan description of Figure 2 in column 8, lines 29-48, teaches disk drives 122-1 to 125-r as significantly less expensive than typical form factor disk drives. However, the "less expensive" drives 122-1 to 125-r are the only drives in the array 100 so that Belsan does not describe a single, contained disk array that includes multiple bus interface technology types.

The claimed combination of an hierarchy of storage types within an individual array enables allocation of storage for different purposes without the overhead of network communication in systems such as that shown in Belsan in which the different storage technologies are in separate arrays.

Rejection of Claims under 35 U.S.C. §103

Claims 5-9, 14-17 and 23 are rejected under 35 U.S.C. §103 (a) as being unpatentable over Belsan et al. (U.S. patent No. 5,403,639) in view of Lee et al. (US Patent No. 7,047,358). The rejections are improper because Belsan in view of Lee which do not disclose "a storage array comprising a cabinet [and] . . . storage devices contained within the cabinet of at least three different and distinct controller-to-storage device bus interface technology types."

KINNEY DURKAN LLP  
2192 MARTIN ST.  
SUITE 150  
IRVINE, CA 92612  
TEL. (714) 251-0220  
FAX (714) 251-0200

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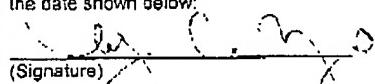
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CONCLUSION

Applicants believe all claims are in form for allowance and a notice to that effect is solicited. No new matter has been added. In the event it would facilitate prosecution of this application, the Examiner is invited to telephone the undersigned at (949) 251-0250.

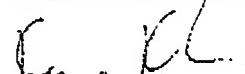
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(Signature)

Joy C. Ng  
(Printed Name of Person Signing Certificate)

October 14, 2008  
(Date)

Respectfully submitted,



Ken J. Koestner  
Attorney for Applicant(s)  
Reg. No. 33,004

KOESTNER & BERTANI LLP  
2192 MARTIN ST.  
SUITE 150  
IRVING, CA 95012  
TEL (949) 251-0250  
FAX (949) 251-0250